

Aug 15

Work Order ID 86571

86571

Page 1

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan:

V

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3272

Rev B

100

100

DOCUMENT CONTROL

DC

Document Control

0.00

0.00

DAS
16
120810
J6

Af for MLJ 12-7-31

(5)

110

110

Large Fab

Large Fab

Large Fab

0.00

0.00

Memo
1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg
D3272

A/R Aluminum Rod 120854

3-Grind End Plate flush

5 8 11 12-07-17

Ae
12.07.18

Work Order ID 86571

July-05-12 10:45:21 AM

86571

Page 2

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00 *5*

Required Date: 7/27/12 Req'd Qty: 5.00 *5*

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

120

QC

Quality Control

QC9- Inspect visual per QSI004- Fusion Welds

0.00

5

Ø

12/07/18



130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

DAS
16
9-09

12/07/19

45

Ø

M/L

12/07/19

140

140

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

5X Ø

R/H

Work Order ID 86571

July-05-12 10:45:21 AM

86571

Page 3

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00 *5*

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

150

QC

Quality Control

QC3- Inspect Part Finish

0.00

5 ✓ 12-719

180

180

Large Fab

Large Fab

Memo

0.00

5 ✓ Ae 12.07.24

Large Fab

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272

A/R Aluminum Rod 120854

6-Grind End Plate flush

7-Install last rivet as per Dwg.

✓ 12.07.24

Ae 12.07.25

Work Order ID 86571

July-05-12 10:45:21 AM

86571

Page 4

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC10- Inspect visual per QSI004- ground welds

0.00

190

QC

Quality Control

Memo

0.00

8/5/12 S. m/a/k

200

QC5- Inspect part completeness to step on W/O

0.00



8/5/12 m/a/k

200

QC

Quality Control

Memo

0.00

8/5

RH

m/a/k
12/5/12

210

Chemical Conversion Coat per QSI005 4.1

0.00

210

HandFinish

Hand Finishing

Memo

0.00

5x/

Work Order ID 86571

86571

Page 5

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00 *5*

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

220

Powdercoat

Powder Coating

Memo

8-30

0.00

START TIME:

3200

OVEN TEMPERATURE:

3200

FINISH TIME:

9-00

230

Wing Walk as per dwg QSI005 4.4 Batch A112\6(200

0.00

230

HandFinish

Hand Finishing

Memo

240

QC3- Inspect Part Finish

0.00

240

QC

Quality Control

Memo

0.00

5X
RH
12/07/22

5xR+1
RH
12/07/30

5RH
RH
12/07/30

Work Order ID 86571

86571

Page 6

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

250

250

Packaging

Pick Kit

0.00

5

7/20/12/31/10

Packaging

Memo

0.00

260

260

QC

Quality Control

QC4- 100% Inspect kits for completeness

0.00

(DAS)
16
9-8

7/20/10

270

270

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD350-591-312
Location: HALL

x5
+8

7/20/10 (5)

Work Order ID 86571

July-05-12 10:45:21 AM

86571

Page 7

Item ID: D350-591-312

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Heli-Access-Step, Long RH

Stop

NS2

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start *NR1*

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Quality Control

Memo

0.00

12/8/2011
MCJ 12/10/2011

Picklist Print

July-05-12 10:45:21 AM

Page 1

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A04.03.22New issue KJ/RF

IPP Rev:B 07-06-09 Added D3572-1 JLM

IPP Rev:C 08-04-02 ECN i163 DD verified by:EC

IPP Rev:D 08-04-08 ECN1164 DD verified by:ec IPP Rev:D fixe route seq in bom DD

10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3272-1 Step		Manufactured	No		110	Each	5.0000		1	5			Ae 12.07.11
-----------------	--	--------------	----	--	-----	------	--------	--	---	---	--	--	-------------

Location	Loc Qty	Loc Code
----------	---------	----------

ST	-10	
WA	15	

84812	5	
-------	---	--

5	
---	--

D3067-1 End Plate		Manufactured	No		110	Each	133.0000		1	5			H 12.07.17
----------------------	--	--------------	----	--	-----	------	----------	--	---	---	--	--	------------

Location	Loc Qty	Loc Code
----------	---------	----------

WA	129	
----	-----	--

78608	4	
-------	---	--

83855	50	
------------------	----	--

<u>84534</u>	75	
--------------	----	--

WA016	4	
-------	---	--

67582	2	
-------	---	--

68214	1	
-------	---	--

79607	1	
-------	---	--

5	
---	--

D3219-1 Plate		Manufactured	No		110	Each	250.0000		2	10			H 12.07.17
------------------	--	--------------	----	--	-----	------	----------	--	---	----	--	--	------------

Location	Loc Qty	Loc Code
----------	---------	----------

WA	191	
----	-----	--

<u>82221</u>	74	
--------------	----	--

<u>83852</u>	117	
--------------	-----	--

WA016	18	
-------	----	--

73410	12	
-------	----	--

77674	6	
-------	---	--

WA017	41	
-------	----	--

81971	41	
-------	----	--

10	
----	--

Picklist Print

July-05-12 10:45:21 AM

Page 2

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

D3066-1

Manufactured

No

180

Each

99.0000

2

10

886964 *x9*

Ae 12-07-23

(1)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST176	31	
WA	68	
85449	68	

MS20600-AD4W4

Rivets

Purchased

No

180

Each

3,202.0000

16

80

Ae 12-07-23

(40)

(40)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
321	878	
ST321	2324	
121011	9	
121340	315	
121444	2000	

D3065-041

Step Leg Assembly Hi

Manufactured

No

180

Each

73.0000

1

5

Ae 12-07-23

(5)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
WA	73	
66149	0	
79336	1	
83870	32	
83871	40	

Picklist Print

July-05-12 10:45:21 AM

Page 3

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

D3067-1
End Plate

Manufactured No

180 Each

133.0000

1

5

12.07.24

Location
WA

Loc Qty
129

Loc Code

78608
83855
84534

WA016
67582
68214
79607

4
2
1
1

Purchased No

250 Each

76.0000

2

10

JB

Location
ST353

Loc Qty
76

Loc Code

121652
76

Manufactured No

250 Each

146.0000

2

10

JB

Location
ST481

Loc Qty
146

Loc Code

83311
83853

Manufactured No

250 Each

93.0000

0

5

JB 12/07/31

Location
ST471

Loc Qty
40

Loc Code

83857

ST481

Loc Qty
40

Loc Code

53

83856

Loc Qty
13

Loc Code

83858

Loc Qty
40

Loc Code

Picklist Print

July-05-12 10:45:21 AM

Page 4

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

AN960JD416
Washer

NAS1149D0463J

Purchased

No

250

Each

29.0000

Start Date: 7/05/12

Start Qty: 5.00

Required Date: 7/27/12

Required Qty: 5.00

16 80
122441 ✓ JB

AN960JD516
Washer

NAS1149D0563J

Purchased

No

250

Each

12.0000

4 20
119546 ✓ JB

ANS-36A
Bolt

Purchased

No

250

Each

224.0000

2 10
✓ JB

D2618
Bushing

Manufactured

No

250

Each

204.0000

2 10
✓ JB

D2230-3
Lug

Manufactured

No

250

Each

158.0000

4 20
✓ JB 12/07/31

Picklist Print

July-05-12 10:45:21 AM

Page 5

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

D2856-400

Manufactured

No

250

f

168.8425

1.2

6

Abrasion Strip

cut(2) D2856-400-720 as per dwg

5 L members

517(480)

MS21042L3

Nut

Purchased

No

250

Each

3,330.0000

2

10

JB

AN4-16A

Bolt

Purchased

No

250

Each

1,143.0000

8

40

JB

12/07/31

Location	Loc Qty	Loc Code
ST403	159.398	81875
81875	159.398	
ST409	9.4445	
63735	0.6696	
68076	0.3149	
71164	8.46	

Location	Loc Qty	Loc Code
ST300	1330	
117885	32	
119017	771	
119075	138	
121444	389	
ST317	2000	
122141	2000	

Location	Loc Qty	Loc Code
ST357	1143	
120187	19	
120422	2	
120770	12	
121652	912	
122063	198	

Picklist Print

July-05-12 10:45:21 AM

Page 6

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

MS21042L5

Nut

Purchased No 250 Each 1,224.0000

2 10 ✓ JB

Location	Loc Qty	Loc Code
300	500	
121652	500	
ST300	724	
108827	4	
116105	5	
116548	43	
117611	2	
119109	658	119109
17651	4	
2937	8	

MS21042L4

Nut

Purchased No 250 Each 1,705.0000

8 40 ✓ JB

Location	Loc Qty	Loc Code
ST300	1705	
119075	116	
121011	193	
121444	1096	121444
121652	300	

AN960JD10

Washer

Purchased No 250 Each 0.0000

4 20 ✓ JB 121524 12/07/31

DART

DESIGN <i>QP</i>	DRAWN BY <i>BS</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01 NEW ISSUE		
B	07.05.18 D3272-1 WAS D2622-120		

RELEASED*07.06.04 - H*

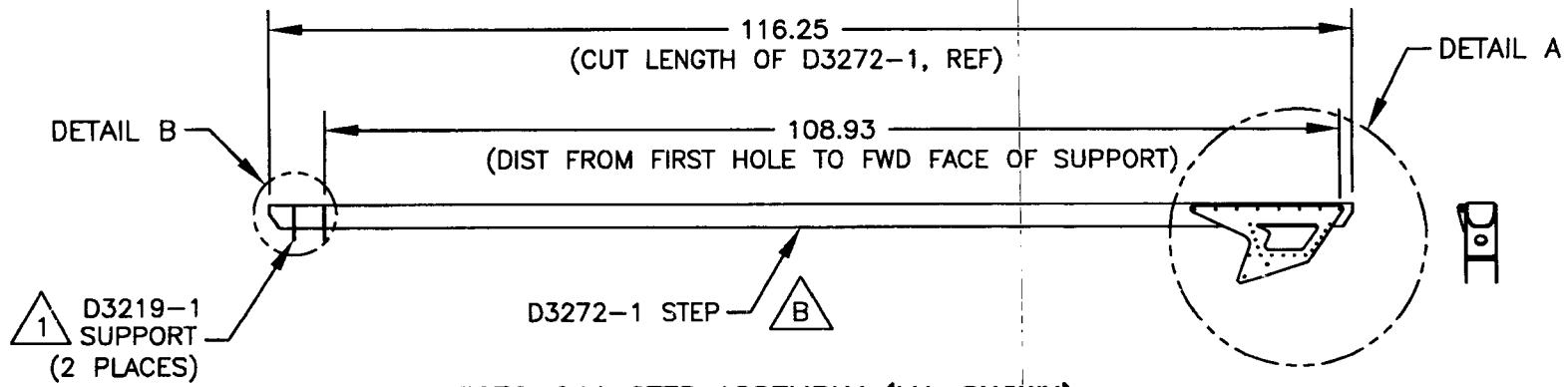
QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET


*16/05/04
BS
D3272-1*
GENERAL NOTES:

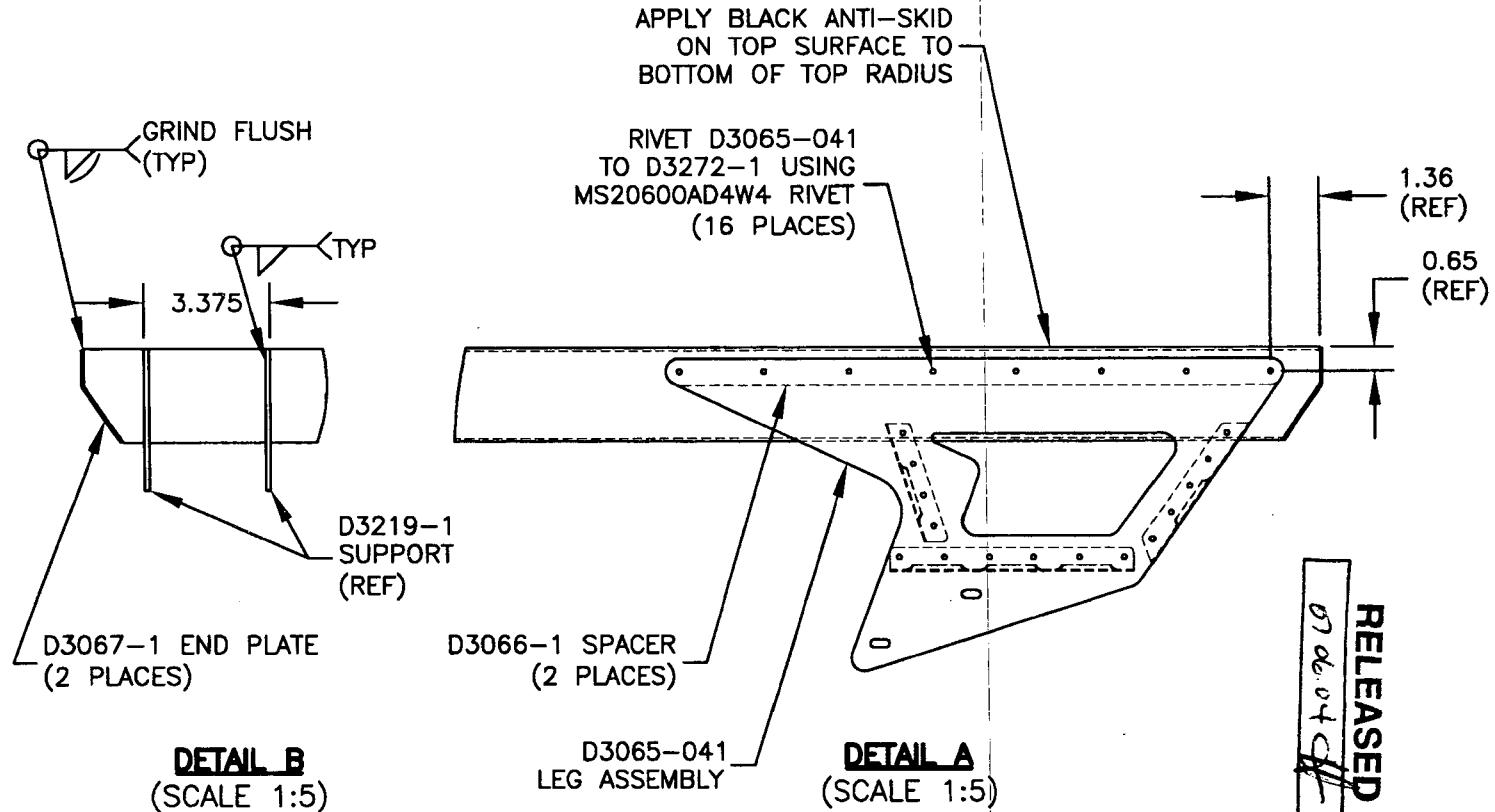
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004.
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



D3272-041 STEP ASSEMBLY (LH, SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)

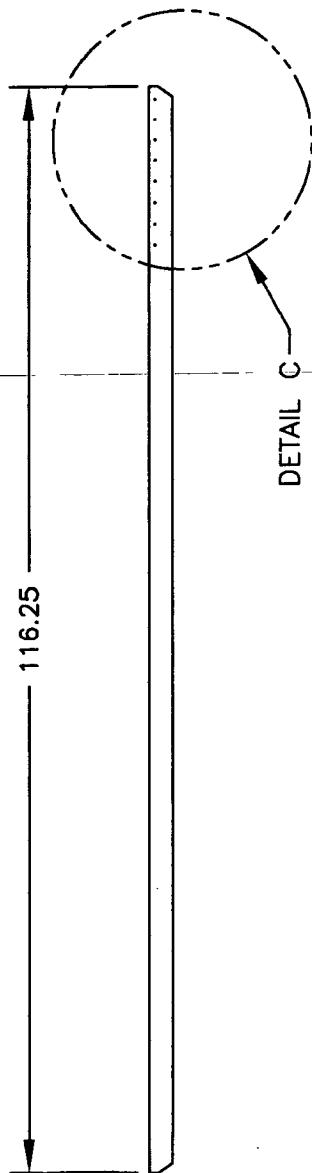


DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
<i>CE</i>	<i>[Signature]</i>	DRAWING NO. D3272
DATE		SHEET 2 OF 3
07.05.18		SCALE 1:20
		TITLE STEP ASSEMBLY, LH LONG

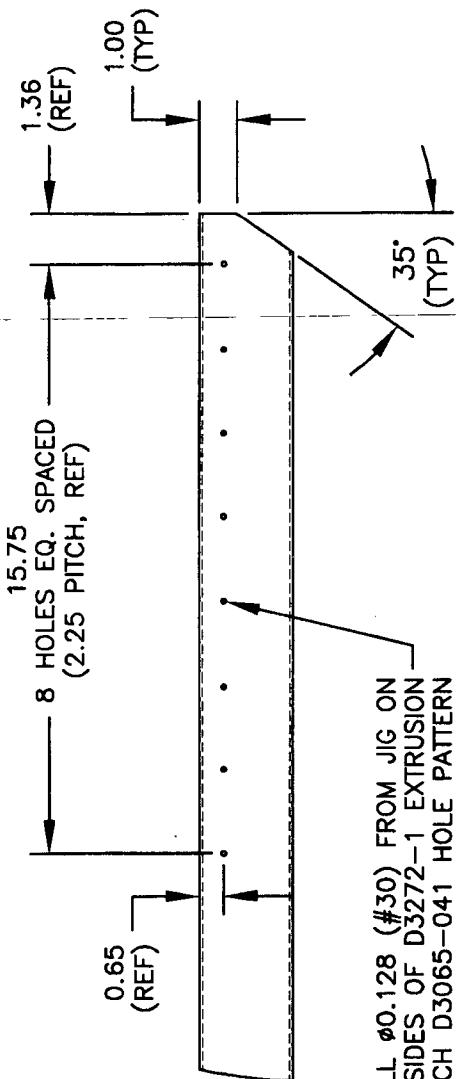
DART

DART

DESIGN <i>QP</i>	DRAWN BY <i>AS</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CE</i>	APPROVED <i>ST</i>	DRAWING NO. D3272	REV. B SHEET 3 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE 1:20



B D3272-1 STEP
(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL #0.128 (#30) FROM JIG ON
BOTH SIDES OF D3272-1 EXTRUSION
TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

RELEASED

07.06.04 *ST*

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Qty -211	Qty -212	Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X								D350-591-211	Heli-Access-Step™, Long Step – High Skid, LH
	X							D350-591-212	Heli-Access-Step™, Long Step – High Skid, RH
		X						D350-591-213	Heli-Access-Step™, Short Step – High Skid, LH
			X					D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
				X				D350-591-215	Heli-Access-Step™, Short Step – Low Skid, LH
					X			D350-591-216	Heli-Access-Step™, Short Step – Low Skid, RH
						X		D350-591-311	Heli-Access-Step™, Long Step – High Skid, LH
							X	D350-591-312	Heli-Access-Step™, Long Step – High Skid, RH
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
			1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		2	2	2	2			D2230-1	MOUNTING LUG
		2	2	2	2	4	2	D2230-3	MOUNTING LUG
8	8					2	2	D2274	RADIUS BLOCK
							2	D2618	BUSHING
4	4	4	4	4	4			D2732-030	CUSHION
2	2	1	1	1	1	2	2	D2856-400-720	ABRASION STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4					2	2	D3080-1	CLAMP
							1	D3235-1	MOUNTING LUG
							1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	2	2	AN3-35A	BOLT
10	10	2	2	2	2			AN4-11A	BOLT
		4	4	4	4	8	8	AN4-13A	BOLT
						2	2	AN5-36A	BOLT
4	4	4	4	4	4	4	4	AN960JD10	WASHER
20	20	12	12	12	12	16	16	AN960JD416	WASHER
						4	4	AN960JD516	WASHER
2	2	2	2	2	2	2	2	MS21042L3	NUT
10	10	6	6	6	6	8	8	MS21042L4	NUT
						2	2	MS21042L5	NUT
						1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.